Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application. Applicants have submitted a new complete claim set showing any marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Listing of Claims:

1-29. (Cancelled).

30. (Currently Amended) In a system that receives data from a plurality of data sources, a method of bandwidth allocation for transmitting video on a cable network, comprising:

receiving the data from the plurality of data sources;

identifying compression parameters to be used to compress the data that is received from the plurality of data sources to a desired depth of compression, the selection of compression parameters being based on a function of types of data to be displayed and a function of client capabilities, wherein the types of data are determined from content of data received from the respective plurality of data sources;

associating the compression parameters with a set of values and threshold ranges for degrading image quality based on the types of data and the client capabilities;

degrading the image quality based on the types of data and the client capabilities for differentially converting said data into compressed video streams responsive to an instantaneous resource restriction; and

multiplexing said compressed video streams on a single transmission line.

31. (Previously Presented) A method according to claim 30, wherein said differentially converting comprises converting each data source to a different frame rate compressed video stream.

32. (Previously Presented) A method according to claim 30, wherein said differentially converting comprises, converting each data source to a different frame quality.

33. (Previously Presented) A method according to claim 30, wherein said resource restriction comprises a bandwidth restriction.

34. (Previously Presented) A method according to claim 30, wherein said resource restriction comprises a computing resource restriction.

35. (Previously Presented) A method according to claim 30, wherein said data sources comprise display commands.

36. (Cancelled).

37. (Previously Presented) A method according to claim 30, comprising providing an indication of said content with said data sources.

38. (Previously Presented) A method according to claim 30, comprising providing an indication of said content by analyzing display commands which are comprised in said data sources.

39. (Previously Presented) A method according to claim 30, comprising providing an indication of said content by a software which generates at least one of said data sources.

40-42. (Cancelled)

43. (Previously Presented) A method as recited in claim 30, wherein the instantaneous resource restriction comprises an instantaneous computing resource restriction.

44. (Previously Presented) A method according to claim 34, wherein said differentially converting comprises converting each data source to a different frame rate compressed video stream.

45. (Previously Presented) A method according to claim 34, wherein said differentially converting comprises, converting each data source to a different frame quality

46. (Cancelled).

47. (Previously Presented) A method according to claim 31, wherein said differentially converting further comprises converting each data source to a different frame quality level.

48. (Previously Presented) A method according to claim 31, wherein said resource restriction comprises a bandwidth restriction.

49. (Previously Presented) A method according to claim 31, wherein said resource restriction comprises a computing resource restriction.

50. (Previously Presented) A method as recited in claim 30, wherein differentially converting comprises asynchronic compression, such that new compressed data is generated only when a corresponding change has first occurred in an image.

51. (Previously Presented) A method as recited in claim 50, further including queuing and delaying generation of new compressed data to accommodate the instantaneous resource restriction.

52. (Previously Presented) A method as recited in claim 30, wherein a same compression depth is achieved for each client receiving compressed video streams from the system.

53. (Previously Presented) A method as recited in claim 30, wherein the content includes a hint corresponding to how the content should be compressed and multiplexed based upon a minimum bandwidth requirement needed by a client.

54. (Previously Presented) A method as recited in claim 53, wherein the hint comprises a hint regarding a maximum quality reduction that can be applied to the content.

55. (Previously Presented) A method as recited in claim 30, wherein the types of data to be displayed include parts of a display.

56. (Previously Presented) A method as recited in claim 55, wherein the parts of the display include at least one of an icon and a menu bar.

57. (Previously Presented) A method as recited in claim 30, wherein the types of data to be displayed include computer game data and text data, and wherein the text data is associated with a value that permits a greater depth of compression.

58. (Cancelled).

59. (Previously Presented) A method as recited in claim 30, wherein the client capabilities are determined based on a customer identifier.

60. (Previously Presented) A method as recited in claim 59, wherein the customer identifier is a digital subscriber number.

61. (New) An apparatus that receives data from a plurality of data sources and allocates bandwidth for transmitting video on a cable network, comprising:

a cable data server configured to:

receive the data from the plurality of data sources,

identify compression parameters to be used to compress the data that is received from the plurality of data sources to a desired depth of compression, the selection of compression parameters being based on a function of types of data to be displayed and a function of client capabilities, wherein the types of data are determined from content of data received from the respective plurality of data sources,

associate the compression parameters with a set of values and threshold ranges for degrading image quality based on the types of data and the client capabilities,

degrade the image quality based on the types of data and the client capabilities for differentially converting said data into compressed video streams responsive to an instantaneous resource restriction, and

multiplex said compressed video streams on a single transmission line.